REMARKS / ARGUMENTS

In the above-identified Office Action the Examiner has rejected claims 1-8 as not providing enablement for the "prevention" of non-cognitive neurodegeneration. The Applicant has deleted the word "prevention" from the claims and it now deals with a method for the treatment of ALS. As such, Applicant believes that at least new Claim 9 derived from Claim 1, is fully enabled.

Claims 1-8 have also been rejected as indefinite. Applicant has withdrawn claims 1-3 and, therefore, this rejection is considered obviated.

New claim 9 avoids the indefiniteness noted by the Examiner.

Claims 1-6 and 8 have been rejected as anticipated by Xia et al. Applicant notes that Xia et al. does not teach the treatment of the disease now claimed, i.e., ALS, accordingly, new Claim 9 and dependent claims 5-7 are not anticipated thereby.

Claim 7 has been rejected as unpatentable over Xia et al. and further in view of Aminoff. Insofar as Parkinson's disease is not recited by Claim 7 as amended, Applicant believes that Claim 7 should patentable thereover.

Claims 1-8 have been rejected as unpatentable over Xia et al. in view of Louvel et al. The Examiner has stated that it would have been obvious to have used sarsasapogenin in a method for treating ALS since sarsasapogenin treats conditions that are characterized by a deficiency in the number and function of membrane bound receptors and mediates increases in the levels of one or more neurotrophic factors.

It is widely accepted that treatment of neuronal disorders in one part of the body, e.g. the cerebrocortex in the case of dementia, Xia et al. does not predict that the same agent will treat neuronal disorders in another part of the body (e.g. the motoneurones in the case of ALS). The biochemical environments and neuronal function and structures and other potential influences on both the disease and its progression and treatment are

the case of ALS). The biochemical environments and neuronal function and structures and other potential influences on both the disease and its progression and treatment are too diverse, and the life processes generally too unpredictable, to allow any such expectations. Genetic origins of certain diseases, or at least influences from genetic factors, add a further level of complexity. In addition, where uses against neurones of the brain are concerned, the existence of the blood-brain barrier provides a significant distinction between brain and non-brain treatments, such as would reduce the ability to analogize between the treatments.

ALS is a particularly intractable disease that has defied attempts to find a cure and in principle any number of possibilities theoretically exist that could be tried. As explained in the present application (page 25, lines 1 to 3) it was the testing of the compounds in a specific model for ALS, which the present inventors undertook, that caused them to find the activity of the compounds against ALS, not any pointer from the prior art.

Louvel states at page 199, right column, that "the rationale for the use of neurotrophic factors in the treatment of ALS comes from the hypothesis that certain of these may be natural trophic factors involved in the growth or survival of motoneurones". This is no more than a unproven hyopothesis, and moreover a hypothesis that would apply equally to any neuronal disorder. It is self-evident that every neurotrophic factor mediator does not have universal benefit against all neurodegenerative conditions, so it cannot be obvious to use the particular compounds of the present invention against ALS.

The discussion by Louvel on page 202, left column, recounts the failures of all the efficacy tests then conducted on neurotrophic factors, or the fact that efficacy tests have not been conducted. This is summarised in the section "Neurotrophic approaches" in the Table 1 on page 201 of Louvel. Therefore, far from "teaching" the "use" of neurotrophic factors in the treatment of ALS, Louvel admits there has been no

such use of such factors, merely a lot of inconclusive research. Therefore Louvel teaches away from the use of neurotrophic approaches in the treatment of ALS.

Claims 1-5 have been rejected as unpatentable over Xia et al. in view of Roberts.

What Roberts states at column 3, lines 14 to 17 is that "ALS is a progressive disease which proceeds at variable rates to death in months or years...As in AD and MS, cholinergic function may be involved to some extent. Pathologically, there is a degeneration of the ganglion cells of the anterior horns in the spinal chord..." (emphasis added)

At lines 44 to 52 of the same column, Roberts states that his active agent, amodiaquin, "blocks K+ channels, decreases the rate of breakdown in the neurotransmitter acetylcholine, thus enhancing nerve function, and decreases undesirable autoimmune reactions of immune lymphocytes".

Clearly, the natural neurotransmitter acetylcholine is involved in neurotransmission at a wide range of neurones. It is a totally hindsight analysis, to state that a compound which is said to increase activity in the neurotransmitter acetylcholine is obvious to try for a particular disease in which cholinergic function only may be involved to some extent. This very lukewarm endorsement of the underlying rationale in such a therapy design is certainly not enough to render it obvious. As with the comments above in relation to Louvel, just because a wide range of neuronal function is mediated by acetylcholine, any compound which increases the activity of acetylcholine doesn't become an obvious treatment for any neuronal disorder, even neuronal disorders in which cholinergic function may only be involved to some extent. Such equivocal teachings do not overcome the teaching away by Louvel.

In any event, the mechanism of blocking the breakdown of acetylcholine, proposed by Roberts, would lead to an activation of all the cholinergic receptors. This is not necessarily advantageous for the treatment of any particular disease, as would be

readily understood by those of ordinary skill in the art. Xia shows only that M1 receptors are increased by certain sapogenin compounds. Therefore, to the reader of ordinary skill in the art looking for new therapies, for example new therapies for ALS or comparing therapies for ALS and AD, an active agent that increases M1 receptor number or function is not analogous to an active agent that decreases breakdown of an agonist of all cholinergic receptors.

Applicant has withdrawn claims 1-4, amending Claim 1 and resubmitting it as new Claim 9. The claims 5-7 are also amended to change them to a proper method claim. Applicant reserves the right to reintroduce claims 1-4 upon the allowance of Claim 1.

Applicant hereby requests reconsideration and reexamination thereof.

No further fee or petition is believed to be necessary. However, should any further fee be needed, please charge our Deposit Account No. 23-0920, and deem this paper to be the required petition.

With the above amendments and remarks, this application is considered ready for allowance and applicant earnestly solicits an early notice of same. Should the Examiner be of the opinion that a telephone conference would expedite prosecution of the subject application, he/she is respectfully requested to call the undersigned at the below listed number.

Respectfully submitted,

Dated: 26 October 2009

Gerald T Shekleton
Reg. No. 27,466
Husch Blackwell Sanders Welsh & Katz
120 South Riverside Plaza, 22nd Floor
Chicago, Illinois 60606
Phone: (312) 655-1511
Fax: (312) 655-1501